



Edwards Dam Removal Update

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The river runs free....

At 9:06 a.m. Thursday, July 1, 1999, the Edwards Dam in Augusta was removed allowing the Kennebec River to flow freely from Waterville to the sea for the first time in 160 years. The work is the result of a decades-long effort to restore Maine fisheries and return the Kennebec to its free-flowing status.

Why is the Edwards Dam removal a historic event?¹

The removal of Edwards Dam reflects a shift in how our society views rivers. The Edwards case demonstrates that in some instances, the benefits of removing a dam and restoring the free-flowing river outweigh the benefits of keeping the dam in place. Not all dams are appropriate for removal, but when the benefits of removal outweigh the benefits of the dam, removal is a legitimate and feasible option for restoring a healthy river.

The Federal Energy Regulatory Commission's decision to order removal of Edwards Dam is nationally significant because it means that the federal government, which controls many of the nation's dams, finally recognizes that a free-flowing, healthy river teeming with life can be more valuable than the electric power and private profit it produces. This decision is the first time that FERC ordered dam removal when the dam owner was seeking to relicense the dam.

Edwards Dam---A brief history

The Edwards Dam was built on the Kennebec River in 1837 to provide mechanical power for mills along the river banks. In 1913, the first electrical generators were installed to provide power for Edwards Manufacturing Company, a large textile mill in Augusta, Maine. During the early 1980's, the mill closed. However, the electrical power generation business continued with Edwards signing a 15-year contract to sell electricity to Central Maine Power. In 1989, a massive fire destroyed the abandoned textile mill and adjacent buildings. The damaged hydro generation equipment was rebuilt and Edwards applied for a new 50-year license and to expand its generating capacity.

The Kennebec Coalition, (American Rivers, the Atlantic Salmon Federation, the Natural resources Council of Maine, Trout Unlimited and its Kennebec Valley Chapter)

¹ American Rivers, <http://www.americanrivers.org/>.

was formed to advocate for dam removal through the federal relicensing process. In 1992 the City of Augusta became a co-licensee with Edwards with a contract that provides 3% of gross revenues going to the city. Soon after, the license to operate the dam expired, but it continued to operate on annual permits pending action on the license application. On November 25, 1997, the Edwards Dam became the first in history to have its license renewal refused by the Federal Energy Regulatory Commission (FERC). The FERC determined that the power it produced fell far short of justifying the environmental harm it caused and ordered the dam to be removed.

The dam owners' contract for electricity with Central Maine Power expired on December 31, 1998. Under a Settlement Accord, signed by the State of Maine and Edwards Manufacturing Company, ownership of the Edwards Dam was transferred to the State of Maine. On January 1, 1999, the Edwards Dam electric generators were shut down and have since been sold at public auction. The State began to plan for the dam removal.

Major funding for dam removal and the associated fisheries restoration effort have been provided by Bath Iron Works and the Kennebec Hydro Developers Group, a coalition of upstream dam owners. No public funds were used for the removal of the Edwards Dam.

Dam removal plans---a brief overview

Two Maine-based firms, E-Pro, (formerly the engineering and licensing division of Central Maine Power) and Woodard & Curran, (a Portland engineering and environmental consulting company) were awarded a contract by the State of Maine to develop detailed plans to remove the dam, to help obtain the required federal, state and local construction permits, and to provide oversight of the entire removal project.

Public hearings were held during the fall of 1998 to provide officials from several cities and towns and the general public with an opportunity to become more aware of the dam removal plans as well as to ask questions or voice concerns about the project.

The state awarded construction contracts in mid-April 1999, and the contractor began to mobilize equipment onto the site in early May.

Dam removal was dependent on weather and river conditions and would not be made until several species of fish, including striped bass, river herring, and the endangered shortnosed sturgeon have completed their spawning in this area of the river. Once the river returned to its natural level, final dam removal began.

The public is invited to a historic event

On Thursday, July 1, 1999, local residents, fishermen, state and municipal officials, and dignitaries from Washington, D.C. gathered at the Tree Freepaper mill site, on the east bank of the Kennebec River in Augusta, to witness history being made and to celebrate the Kennebec's past and hopes for the future.

The event attracted media attention from around the world. Reporters from major national television networks, newspapers and magazines covered the historical event.

Beginning at 8:00 a.m. activities started with a large-screen presentation of images of the Kennebec past, present, and future. The festivities included a welcome from Tree Free representatives, who made their site available for the ceremony. Father Lionel Chouinard, of the nearby Saint Augustine's church offered the invocation. The church, overlooking the dam, served thousands of Edwards Mill employees throughout its many years of operation.

Speakers included Governor Angus King, Interior Secretary Bruce Babbitt, and Under-Secretary of Commerce Terry Garcia, Augusta Mayor Bill Dowling, spokesman for the Kennebec Coalition, Everett "Brownie" Carson, and taped comments from Maine's Congressional Delegation. Music was provided by Schooner Fare.

The breach: At 9:06 a.m. a recently-built gravel "coffer dam," located on the west side of the dam was opened by backhoe. The river washed away the temporary barrier releasing the water through a previously-removed, 60-foot section of the dam. All of this was visible by viewers from the Tree Free site and was also broadcast in close-up detail on a large screen. The dam was then removed in stages and was completely gone by November.

With its removal, 17 more miles of the Kennebec became free flowing for the first time since 1837, re-opening prime spawning habitat. In a relatively short time, biologists expect a dramatic increase in populations of migratory fish, including striped bass, salmon, shad, herring, and alewives. A 10-year program designed to rebuild the fish stocks was also planned. As a result, many believe that the Kennebec will become a premier fishing and recreation river in the years ahead, opening up new and important economic development opportunities for the region.

Since the removal

According to the American Rivers, there have been many benefits to the dam removal.²

Migratory Fish are Returning

² American Rivers, <http://www.americanrivers.org/>.

- *Alewives* have returned to Waterville and Winslow, 18 miles upstream from the former Edwards Dam. State fisheries biologists estimate the number of alewives below Waterville to be nearly two million.
- *Striped bass*, an angler's favorite, known in Maine to reach up to 67 pounds, were caught in Waterville last fall and have returned again this spring.
- *American shad* have been caught in Waterville this spring, another first. Shad will be trapped and trucked to a hatchery in Maine, which is working to maximize shad production for release back into the river. Young shad will be released into the river to help restore the species to historic levels.
- *Atlantic Sturgeon* have been reported jumping above the old dam site.

Wildlife Benefits

- *Bald eagles, osprey, blue herons, kingfishers and cormorants* all will benefit from improved fisheries and can easily be seen catching fish along the river.
- *Alewife floaters*, a fresh water mussel, instinctively sense when alewives are passing and release their spawn that the alewives carry up river attached to their gills.

Water Quality has Significantly Improved

- *Water quality improves dramatically.* Before Edwards Dam was removed, the impoundment could not meet minimum water quality standards and could not begin to support a healthy river ecosystem. Just months after the removal of Edwards dam, state scientists documented a dramatic improvement in water quality. The river has been officially upgraded to class B to reflect the improvement in river health.
- *Fish and Anglers alike will welcome the dramatic increase in mayflies and stoneflies.* Mayflies and stoneflies, rarely seen in samples before the removal of Edwards, have dramatically increased in numbers.

Recreational Opportunities Abound

- *Boaters and anglers have returned* to the area in large numbers. Last summer the newly restored river was used extensively by the public to fish, canoe, birdwatch, and generally enjoy the river.
- *Riverbanks are greening with native grasses, shrubs and other vegetation.* Many people feared that muddy banks, exposed by lower water levels after the dam removal, would be unsightly and deter recreational use. Instead, vegetation grew back on the banks quite rapidly.
- *More natural water levels have revealed rapids, such as Six-Mile Falls, and many small islands have reappeared.* These features, newly exposed

after 162 years, create an interesting and varied trip down the Kennebec River.

Communities and Businesses are Being Reborn Along With the River

- *In Augusta, the Capital Riverfront Improvement District*, formed by legislation, will "protect the scenic character of the Kennebec River corridor while providing continued public access and an opportunity for community and economic development..."
- *Plans for a park where Edwards mill once stood are well under way.* Current proposals envision the Edwards mill site as a passive recreational park.
- *Kennebec communities are planning new river celebrations and renewing old ones.* The Whatever Celebration in Augusta includes a special celebration on the reborn river this year. "To help share in the celebration of the opening of the Kennebec we would like to invite you to canoe or kayak with us on July 2nd from Fort Halifax to Fort Western," said Fort Western's Director Jay Adams.
- *Guide services and local businesses are looking forward to a good year on the river.* Bob Dionne, Aardvark Outfitters noted, "Last year I said we'd see 30 drift boats working there in the next five years - I'd say now it's going to be double that. No matter how optimistic initial economic predictions were, we're going to surpass them."